

WHAT IS CLAIMED IS:

1. An information processing apparatus supporting secret information management, comprising:
  - a management master extraction module which receives a management target file containing secret information via an input interface and extracts management master information, including a file ID and information on validity of the management target file, from the management target file;
  - a storage device which stores a file management database with which the management master information on each management target file is registered;
  - a storage event output module which outputs a signal indicating a storage event of the management target file in the storage device to an output interface;
  - a deletion target extraction module which receives a deletion request regarding the management target file via the input interface and extracts information on the management target file corresponding to the deletion request from the file management database;
  - a file deletion module which executes the deletion of the management target file from the storage device based on the information on the management target file extracted by the deletion target extraction module;

a management master information update module which updates the validity information on the management target file deleted by the file deletion module, included in the management master information registered with the file management database, into invalid; and

a deletion information output module which outputs a signal indicating that the management target file has been deleted by the file deletion module to the output interface.

2. The information processing apparatus according to claim 1, further comprising a management master information deletion module which locates the management master information on the management target file which has been registered with the file management database and deletes the management master information in cases where deletion mode information included in the deletion request designates a mode requesting not only the deletion of the management target file but also the deletion of the management master information.

3. The information processing apparatus according to claim 1, further comprising:

an access authority extraction module which receives a backup request regarding a management target file via the input interface and extracts access authority information on the management target file corresponding to the backup request from the file management database;

an access authority judgment module which receives user authority information on a user corresponding to the backup request via the input interface and judges whether the management target file corresponding to the backup request may be accessed or not by checking the user authority information with the access authority information;

a copy generation module which extracts the management target file corresponding to the backup request from the storage device and generates a copy file of the management target file if the access authority judgment module judged that the management target file may be accessed;

a copy output module which outputs the copy file of the management target file to a backup medium; and

a copy file registration module which extracts management master information on the copy file and stores the extracted management master information in the file management database.

4. The information processing apparatus according to claim 1, further comprising:

an access authority extraction module which receives a usage request regarding a management target file via the input interface and extracts access authority information on the management target file corresponding to the usage request from the file management database;

an access authority judgment module which receives user authority information on a user corresponding to the usage request via the input interface and judges whether the management target file corresponding to the usage request may be accessed or not by checking the user authority information with the access authority information;

an available file output module which extracts the management target file corresponding to the usage request from the storage device and outputs the extracted management target file to the output interface if the access authority judgment module judged that the management target file may be accessed;

an updated file generation module which receives an update process for updating the management target file outputted by the available file output module via the input interface and thereby generates an updated file;

an updated file storage module which stores the updated file in the storage device; and

an updated file registration module which extracts management master information on the updated file and stores the extracted management master information in the file management database.

5. The information processing apparatus according to claim 3, further comprising:

a relevant deletion target extraction module which extracts information on the copy file derived

from the management target file corresponding to the deletion request in addition to the information on the management target file from the file management database;

a relevant file deletion module which executes the deletion of the copy file from the backup medium based on the information on the copy file extracted by the relevant deletion target extraction module;

a relevant management master information update module which updates the validity information on the copy file deleted by the relevant file deletion module, included in the management master information registered with the file management database, into invalid; and

an informing module which informs a second information processing apparatus connected with the information processing apparatus via a network that the copy file has been deleted by the relevant file deletion module, via the output interface.

6. The information processing apparatus according to claim 4, further comprising:

a relevant deletion target extraction module which extracts information on the updated file derived from the management target file corresponding to the deletion request in addition to the information on the management target file from the file management database;

a relevant file deletion module which executes the deletion of the updated file from the storage device based on the information on the updated file extracted by the relevant deletion target extraction module;

a relevant management master information update module which updates the validity information on the updated file deleted by the relevant file deletion module, included in the management master information registered with the file management database, into invalid; and

an informing module which informs a second information processing apparatus connected with the information processing apparatus via a network that the updated file has been deleted by the relevant file deletion module, via the output interface.

7. The information processing apparatus according to claim 1, further comprising:

a business application process judgment module which judges whether a user has authority or not in a business process authority database, in which the presence/absence of deletion authority, backup authority or usage authority of each user regarding each management target file is stipulated, when a business application using a management target file is executed; and

a business application process execution module which extracts the management target file to be

processed by the business application from the storage device and provides the management target file to the business application if the business application process judgment module judged that the user has the deletion authority, the backup authority or the usage authority regarding the management target file.

8. The information processing apparatus according to claim 1, further comprising:

- a first copy execution module which copies information stored in the storage device into a second storage device after the deletion of the management target file from the storage device is executed by the file deletion module;

- a first demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the storage device for a preset number of times;

- a second copy execution module which copies the information stored in the second storage device back into the storage device; and

- a second demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the second storage device for a preset number of times.

9. The information processing apparatus according to claim 5, further comprising:

- a first copy execution module which copies information stored in the storage device and the backup

medium to a second storage device after the deletion of the management target file and the copy file from the storage device and the backup medium is executed by the file deletion module and the relevant file deletion module;

a first demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the storage device and the backup medium for a preset number of times;

a second copy execution module which copies the information stored in the second storage device back into the storage device and the backup medium; and

a second demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the second storage device for a preset number of times.

10. The information processing apparatus according to claim 6, further comprising:

a first copy execution module which copies information stored in the storage device to a second storage device after the deletion of the management target file and the updated file from the storage device is executed by the file deletion module and the relevant file deletion module;

a first demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the storage device for a preset number of times;



a second copy execution module which copies the information stored in the second storage device back into the storage device; and

a second demagnetization execution module which writes a prescribed data pattern to each memory unit such as each sector of the second storage device for a preset number of times.

11. An information management method for managing secret information by use of an information processing apparatus, comprising the steps of:

receiving a management target file containing secret information through an input interface and extracting management master information, including a file ID, information on access authority to the management target file, and information on validity of the management target file, from the management target file;

registering the management master information on each management target file with a file management database;

storing the management target file in a storage device associating the same with the management master information;

outputting a signal indicating the storage event of the management target file in the storage device to an output interface;

receiving a deletion request regarding the management target file via the input interface and

extracting information on the management target file corresponding to the deletion request from the file management database;

executing the deletion of the management target file from the storage device based on the information on the management target file extracted from the file management database;

updating the validity information on the management target file deleted from the storage device, included in the management master information registered in the file management database, into invalid; and

outputting a signal indicating that the management target file has been deleted to the output interface.